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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/772,469	02/06/2004	Masaru Fukuda	Q79675	6716
23373	7590	08/10/2004	EXAMINER	
SUGHRUE MION, PLLC 2100 PENNSYLVANIA AVENUE, N.W. SUITE 800 WASHINGTON, DC 20037			LE, THANH TAM T	
			ART.UNIT.	PAPER NUMBER
			2839	

DATE MAILED: 08/10/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 10/772,469	Applicant(s) FUKUDA, MASARU	
	Examiner Thanh-Tam T. Le	Art Unit 2839	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 06 February 2004.
- 2a) ☐ This action is FINAL.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>2/6/04</u> . | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Wayt et al. (5,910,027).

Regarding claims 1, 7-9, 11-12, 14-16 and 19-20, Wayt et al., figures 1 and 8, disclose a connector lock mechanism for locking the connected condition of a set of male and female connectors to be engaged with each other, the connector lock mechanism comprising:

- a flexible arm (48) disposed on one of the male connector and extending along a direction which one connector can be engaged with the other connector;
- an engaging portion (70) disposed on the flexible arm;
- an arm guide surface (74) disposed on the other connector;
- a securing member disposed on the other connector. The securing member securing the engaging portion of the flexible arm; and
- a connector removing mechanism including a flexible elastic piece formed integrally with the one connector and a push out guide surface which is formed integrally with the other connector and also which when the two

connectors are operated for their mutual engagement, deforms the flexible elastic piece elastically to thereby generate a push-out force separating the two connectors from each other in their mutually removing directions, wherein the elasticity of the flexible elastic piece and the inclination angle of the push-out guide surface are set such that push-out force generated by the connector removing mechanism is greater than contact resistance caused by mutual connection between male and female-type terminals respectively held within their associated connectors.

Regarding claim 2, the flexible arm serves also as the flexible elastic piece and the arm guide surface serves also as the push-out guide surface.

Regarding claim 3, in the range of the mutual engagement between the two connectors, the angle of the push-out guide surface is changed in the intermediate portion thereof so that a greater push-out force can be generated in the mutually connected range of the male and female-type terminals than in the mutually unconnected range of the male and female-type terminals.

Regarding claims 4 and 18, the flexible elastic piece is formed integrally with the flexible arm, and wherein the connector lock mechanism further comprising a wrong operation/ withdrawal preventive piece formed integrally with the flexible arm, the wrong operation preventive piece preventing the two connectors from being engaged with each other while the flexible arm is flexed in a locking removed condition.

Regarding claims 5, 10, 13 and 16-17, the flexible elastic piece and the push-out guide surface are provided in at least two.


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Regarding claim 6, while the flexible arm is held in its flexed condition, the flexed condition of the flexible elastic piece generates a push-out force acting the two connectors in their mutually removing directions and, if the two connectors are completely engaged with each other, the flexed condition of the flexible arm and the flexed condition of the flexible elastic piece are removed.

### ***Conclusion***

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thanh-Tam T. Le whose telephone number is 571-272-2094. The examiner can normally be reached on 7:30-5:00.
4. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, TC Patel can be reached on 571-272-2098. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.
5. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

TL.  
8/8/04

  
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T. Le